

DM330 Series

Magnetostrictive Liquid Level Sensor



- No calibration needed
- Program zero & span in the field
- Set upper and lower limits on bench prior to installation.

High Accuracy

0.1% accuracy full scale over 4-20mA span.

Minimal Maintenance

 Unique diagnostic output provides float position beyond set span, beyond active range, as well as loss of float.

Patented Low Clearance Design

• Electronics all within 5/8" diameter sensor allows wider mounting options at less cost.

Patented Flexible Probe

 PVDF version provides cost effective, high accuracy inventory monitoring up to 40 feet with flexibility and reduced weight for easier installation.

Intrinsically Safe

• FM, ATEX, CSA, CE, 3A Approved

Magnetostrictive Level Measurement System takes field proven sensing technology and incorporates intrinsic safety with a field programmable zero and span. Packaging is our patented low clearance design, making the DM330 ideal for level monitoring in a variety of liquids and tank designs.

Two Variations - Sensors are available in rigid 316SS or flexible PVDF designs. The stainless steel version has a choice of a mini-connector or an optional housing which includes terminal connectors with zero and span adjustments. All offer totally welded construction.

The flexible (PVDF) version offers with a variety of mounting options and provides cost effective, high accuracy inventory monitoring in tanks up to 40 feet.

All of the sensor's electronics are integrated within the 5/8 " diameter sensing tube. This breakthrough in package design eliminates the electronics enclosure at the top of the sensor, which reduces cost and offers greater options for insertion and mounting.

The DM330 is a two wire loop powered intrinsically safe sensor with a configurable 4 -20 mA span.

A variety of floats and mounting accessories are available to fit virtually any application. Included is a sanitary stainless steel version. Contact the factory to match your needs today.



















Continuous Level Measurement

DM330 Series

Specifications

 Technology: Magnetostrictive

• Calibration:

None

• Operating Voltage: 13.5 to 30Vdc

• Loop Impedance (R):

1000 ohms 24Volts

• Output:

4 to 20mA

• Temperature Range:

-20°C to 100°C (-4°F to 212°F) Not Approved for Hazardous Locations above 70°C (158°F)

Null Zone:

-20°C to 70°C (-4°F to 158°F) Max.

Pressure Rating:

Stainless Steel: 1000psi (69 bar) float dependent

PVDF (flexible): 150 psi (10 bar) Resolution:

0.025% full scale or 0.014" (0.35mm) (whichever is greater)

Repeatability:

0.014" + 0.05% of span typical, 0.014" + 0.4% of span max

Accuracy:

0.1% or 0.050" (1.27mm) (whichever is greater)

• Enclosure:

Stainless Steel Standard Epoxy painted aluminum housing (option) Probe Material: 316SS Probe Rating: IP68

Probe Length:

Stainless Steel: 20" - 192" (508 mm - 7315 mm) Consult factory for lengths to 288" PVDF (flexible): 20" - 480" (508 mm - 12192 mm)

Null Zone (Top):

Stainless Steel: 8" (203 mm) PVDF (flexible):

12" (305 mm)

• Deadband (Bottom):

Stainless Steel: 2" (51 mm) PVDF (flexible): 6 to 14" (152 mm to 356 mm)

Approvals:

Approved Intrinsically Safe for hazardous locations by the following agencies



Class I Div 1



Class I Div 1



II 1 G, EEx ia 11B T4 T 70° C

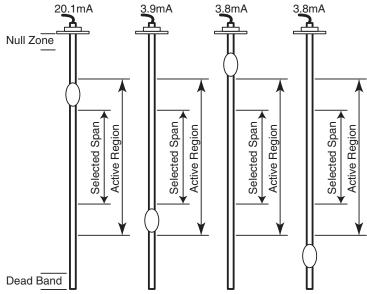


0344



74-03

Diagnostic Locates Float Position



^{*} Specifications may change without notice

Continuous Level Measurement

DM330 Series

Dimensions inches, (mm)

M STYLE CONNECTOR OVERALL LENGTH (O.A.L.) 7/8-16 UNS-2A 1.00 (2.54) 0.625 (15.88) 8.00 (203.2) NULL ZONE ACTIVE RANGE

V STYLE CONNECTOR [PVDF VERSION]

OVERALL LENGTH (O.A.L.)

3/4 NPT

10.625
(15.88)

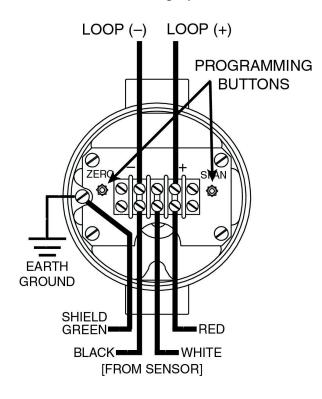
See Specifications for PVDF

ACTIVE RANGE

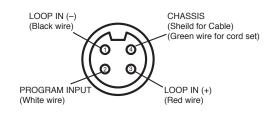
Wiring

"H" Housing Option

NULL ZONE



"M" Connector



WIRING COLORS							
SIGNAL	US	EU					
IN (+)	RED	BROWN					
IN (-)	BLACK	BLACK					
PROGRAM	WHITE	BLUE					
CHASSIS	GREEN	WHITE					

Continuous Level Measurement

DM330 Series

Model Numbering

Magnetost	rictive I 4	aval Mase	irement Sv	etem					
DM330 DM				3(5)11					
		le / Materia							
X V S F	31 PV 31	6SS 'DF (Polyvi 6 SS 3A Sa	nylidene Flu anitary 240	Grit Electro	opolished				
	F 316 SS Food Grade 180 Grit Connector Style								
	M D S	M Mini connector D Dual 3/4" NPT - for both housing and vessel mounting S Single 3/4" NPT - for housing mounting, vessel mtg. via compression fitting, flange or tri-clamp							
	● Thread Mounting								
		E	-		I" NPT with	th Connector Style M, D, or S			
			Overall I	-					
				•	•	o exceed 600 inches, 288" for 316 SS)			
				Output Sig F1 1 (gnai Dutput Sigr	nnal			
					oat 1 Type	•			
				XX		e Float/Weight Kits in Chart below			
			Housing Option						
			H Condulet with Zero & Span push-buttons* X None						
			Special Mounting						
						 C C version [limited temp. range] T TriClamp with E-clip retainer P Triclamp with CIP perm. end plug [float non-removable] W Welded Flange Fitting X None 			
	Mounting Size								
	•		\			20 2" Tri-clamp 25 2 1/2" Tri-clamp 30 3" Tri-clamp 40 4" Tri-clamp CF Adjustable Compression Fitting XX None			
DM330		E	F1			*(only offered with "S" connector style			

Float Kits Weight Kits

Float Type selection includes Float, spacer and retaining clip

X* = Weight Kit

	Material	Shape	Diameter	Hight	S.G.	Max. Press.		Material	Shape	Dia.	Hight	t e e e e e e e e e e e e e e e e e e e
PS0	316SS	Oval	1.83"	2.94"	0.61	350psi	0	316SS	No weight kit on Stainless Steel probes (X, S, F)			
PUX*	Ureth	Cylind	3.85"	2.75"	0.52	50psi	1	316SS	Round	2"	5"	For PVDF Probe from 145" to 288" long
PNX*	Nitrophyl	Round	2.02"	1.38"	0.4	300psi	2	316SS	Round	2"	7"	For PVDF Probe from 145" to 288" long
PEX*	316SS	Oval	2.05"	2.7"	0.54	350psi	3	316SS	Round	2"	11"	For PVDF probe from 289" to 432" long
XXX	None						4	316SS	Round	2"	13"	For PVDF probe from 433" to 600" long
YYY -	Special Float / Float Kit ordered as a separate line item											

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